

The Answers.

A Guide from Apple Computer to help you choose the best computer solutions for your business needs.

Introduction and Contents.



Whether you're buying your first computer or adding to your current system, you probably have a good idea of some of the ways a computer can help you run your business better.

Maybe it's time to improve the accuracy of your job costing. Or your staff has increased and it's time to automate payroll. Perhaps you'd like more accurate financial reports to give you better control of your bottom line. Or you'd like to produce printed mailings and flyers

in-house to save time and money. Chances are, you want a computer to help you in several areas, so you can get back to doing what you do best. Running your business.

We understand how confusing buying a computer can be. So we've designed this Guide to help you choose the computer that best meets the needs of your business and your budget. It will also help you better analyze your needs, making it easier for you to discuss your options with a computer salesperson.

Specifically, this Guide will show you how an Apple® Macintosh® computer can help you run virtually every area of your business more efficiently and profitably. And it will give you several compelling reasons why you should choose Macintosh computer solutions.

This Guide is designed to help you whether you're completely new to computers or an experienced user. Skip around and read just the parts that suit you. Here's what this Guide offers:

Macintosh Basics.



Page 2

For Your Business. Explains a wide variety of business tasks that Macintosh can help you tackle. Includes the areas of Business Development, Accounting, Office Management, Business Management, Marketing Materials, and Presentations.

Why Macintosh? Page 8 Gives you specific reasons why Macintosh is

uniquely suited to the needs of small businesses. Macintosh Business Profiles. Page 14

Small business users tell you how they've profited with Macintosh.

What Next? Page 20

Specific ideas about how you can get more information about Macintosh computers and their use in businesses like yours.

Computer Needs Questionnaire. Page 21 A checklist that will help your authorized Apple reseller understand your computer needs quickly. Fill it out and take it with you so that your Apple reseller can help you decide what's best for your specific business.

Which Macintosh?



Computer Basics.

Page 24 Explains basic terms to help you better understand computer hardware and software and your Macintosh options. If you have no computer experience, you may want to read this section before reviewing descriptions of Macintosh models.

Macintosh Computer Guide. Page 28 Brief descriptions of a range of Macintosh models to help you decide which ones are best suited to meet your business needs and your budget.

Macintosh Hardware Specifications.

Page 32 Detailed technical specifications for each of the Macintosh models described in this Guide.

Business Solutions. Page 36 A chart to help you determine which Macintosh models will give you the sophistication and performance you need for your particular business tasks.

Complete Systems. Page 38 Describes several complete Macintosh systems (computers, printers and other hardware) that are recommended for various levels of need. Use this when you visit your authorized Apple reseller as a starting point to discuss how you can get the most from your Macintosh.

Questions and Answers. Page 40 Answers to questions often asked by new Macintosh buyers.

More Information.



General Software List. Page 42 A sample listing of software applications available for general office productivity including word processing, database, spreadsheets, scheduling, accounting and more.

Specialized Software List. Page 44 A sample selection of software programs developed for specific kinds of businesses from retail and manufacturing to real estate, legal and health care.

Reference Guide. Page 46 Additional resources you can use to find out more about Macintosh computers and how they are used in small businesses.

Glossary. Page 48 A list of computing terms and their meanings explained in everyday English.

Reader Survey Card. Page 51 Tell us what you think about this Guide by taking a moment to complete this survey.

For the name of your nearest authorized Apple reseller, call 1-800-538-9696; extension 950.

Each of the three major sections in this Guide is color-coded for easy reference. Look for the colored dots over the page numbers at the bottom of each page.

Macintosh Basics.











"It's just so blue."

The water

You'll notice it the very first thing.
Blue so blue that you can almost feel the color.
Green like an emerald. Purple that is royal and
thick with color. All blended together in a
warm both of magic and sensual breezes.

On your way across the water to the South Seas. Where everything you've ever dreamed of, is true.

Come with us. To Paradise.

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If this invoice is paid within 10 days, deduct 0.49.

INVOICE

BYVOICE #

You're no doubt already aware of many things that computers could do to automate your business. To fill you in on any you may have missed, and to help put it all in perspective, here's a quick summary of what a Macintosh can offer you. Browse through and learn more about the business tasks Macintosh can help you tackle and the software you can use to accomplish those tasks.

Business Development.

Dozens of business development tasks can be automated with a Macintosh. You can use it to identify new prospects, track customer sales, contact new customers and maintain current customer relationships. A few specific software categories that are especially helpful to business development include:

Word Processing. Written communication is essential to any business that keeps in touch with its customers. With word processing applications, many of the repetitive tasks of writing are automated.

Macintosh excels at word processing because of its ability to print multiple typestyles and easily combine text and graphics. Popular Macintosh word processors can not only help you type and revise any document quickly but can also help check your spelling, number your pages, generate a table of contents, align your margins, add footnotes and even create personalized form letters.

Target Marketing. With Macintosh target marketing software, you can search through data on millions of consumers and businesses to find potential customers. Then, you can preview lists and choose selected names for target mailings. Or you can analyze your sales by geographic areas and determine where your best customers are. Then generate mailing labels and reports based on your specifications. And only Macintosh allows you to perform these functions easily because Lotus® MarketPlace is only available on the Macintosh.

Database Management. Customer development is essential to the growth of any business. Database software helps you better manage lists of prospects, customers, inventory, employees or any other information you need to track and maintain. For instance, your customer list could track information on who buys what, how quickly they pay and when you last contacted them. You could check these lists to determine which customers are most profitable for you and use the information to develop marketing plans to maintain their loyalty. Macintosh lets you easily merge customer data with your word processing documents to produce professional, personalized mailings.

The special strength of Macintosh database applications is flexibility. You can easily create customized reports with the exact information you need when you need it.

Documents created on a Macintosh can help you make your business look better.



Accounting.

Number crunching involves tedious repetition and accurate calculation, traits that play right to a computer's strengths. It's no surprise then, that Macintosh offers software that excels in every area of accounting. It can help you manage your cash flow and give you greater control of your finances. Accuracy is improved and reports are at your fingertips. Here are a few examples of accounting software:

Bookkeeping. If you turn your records over to an accountant monthly or yearly, you may not need a full-blown accounting system. In a smaller business, bookkeeping software may suffice to total up your expenses and income neatly and give you a good look at your bottom line. Bookkeeping programs are easier to learn than accounting programs, requiring no special knowledge of credits and debits or assets and liabilities.

Billing. Macintosh can quickly total purchases and add tax and shipping costs. Invoices can be created with fewer errors since part numbers and totals can be entered automatically. Macintosh will print out invoices, packing slips and shipping labels. Billing software can compute time and expenses and produce a detailed professional invoice. Which means bills go out faster and payment comes back sooner.

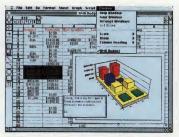
Payroll. What used to be a time-consuming chore on a manual system is quick and easy on a Macintosh. Simple-to-use payroll programs can generate paychecks for both salaried and hourly employees, tracking overtime, double-time, sick and vacation time on both a current and year-to-date basis. Then, these programs can print out all the necessary government forms, from W-2's to quarterly tax liability reports.

Accounting. For the larger business with in-house bookkeeping, accounting software is a must. Macintosh integrated accounting systems make it easy for you to manage your cash flow. For example, your Macintosh can write a check, update the transaction in Accounts Payable and post it to the appropriate expense category in your General Ledger. At the end of the period, your accounting software will automatically post each journal entry and print out all the appropriate financial statements.

With a Macintosh, your staff can spend less time managing financial records and more time managing the finances of the business. You'll know exactly how much cash you have and how much you need so you can plan more efficiently. And timely financial information lets you take advantage of supplier discounts and can help you avoid finance charges.



Word processing programs let you check spelling on a word, a paragraph or a whole document.



With a spreadsheet, you can turn numbers into impactful threedimensional charts.



Accounting programs let you write checks and record them simultaneously in Accounts Payable.

With more efficient accounting systems, you may even find yourself with excess cash.

Office Management.

Whether you work on your own, with a single assistant or with six dozen employees, Macintosh can help streamline your office procedures. Software you'll want to look into for office management includes:

Forms Processing. Forms software lets you easily reproduce the paper forms you already use in your business, complete with your company logo and any other important graphics. In addition, a Macintosh helps you fill out your forms, making sure you enter names and numbers in the right blocks, automatically date-stamping the form, totaling columns and checking for typos. Computerized forms will help you save money, maintain more accurate records and reduce some of the paper flow in your office.

Electronic Mail. If your office is buried in memos, electronic mail—often called "E-mail"— can help. With a Macintosh and an E-mail application, employees can send and respond to memos electronically and more efficiently collaborate on projects. During a busy day, you can get detailed messages at any time. You'll have a written copy showing the date and exact time the message was sent. It's easy to send messages to others, even when you can't get through by phone. And with some E-mail programs, you can even check to see who's read your messages.

Office Utilities. Macintosh is designed so you can readily add utility programs like appointment calendars, pop-up calculators and an electronic Rolodex.® Hundreds of these utilities — known as Desk Accessories — are available at low cost or sometimes no cost. You can access these utilities no matter what else you're doing with your computer.

Data Backup. Keeping important copies of essential business data is simplified by backup programs that quickly search through all your computer records to find information that's been updated or added since your last backup. These programs automatically make an exact duplicate of this crucial information, so you'll never be without the facts and figures you need.

Business Management.

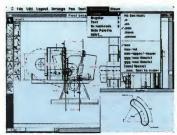
The advanced design of Macintosh has enabled it to go beyond the rote calculations and text processing other computers are known for. With a Macintosh, you can use software that actually aids in the creative planning essential to any small business. It will help you keep projects on time and within budget. You can project future growth and compare estimates to actual costs. Still other kinds of software help organize your thoughts and even help you come up with new ideas.



Produce professional-looking, colorful newsletters from your own desktop.



Keep detailed information easy to access in a database program.



Computer-aided design (CAD) programs belp a wide range of professionalsfrom engineers to architects.

Some of these applications include:

Spreadsheets. Just as word processors let you easily enter and revise text, spreadsheets help you manipulate and calculate numbers—from simple arithmetic to complex forecasting and analysis. You can easily generate charts that help you view complex data in a variety of ways that make it easier to spot trends and understand how they impact your business.

Macintosh spreadsheet programs enable you to ask "what if" questions without spending hours on painstaking calculations: "What if we drop our prices by 5%? By 10%?" Or "What happens if health benefits go up 44%?" Change your assumptions and every number on the spreadsheet is automatically recalculated. With Macintosh, you can use information like this every day that you simply never would have had time to create manually.

Project Management. When your project's under way, a Macintosh and project management software help you keep track of the critical path necessary to complete the job. If supplies don't arrive on time or a subcontractor finishes work ahead of schedule, your project management software will automatically adjust all upcoming deadlines to reflect the changes. When you can see that information early in a project, you can adjust your plans to save time and money later. With Macintosh as your project manager you can adapt quickly to changes and better serve your customers.

Outlining Software. Outliners are a great aid to brainstorming and idea generation. With a Macintosh, it's easy to jot down rough thoughts in outline form, then move topics and subtopics around at will to reorganize your ideas into a coherent form. Outliners let you see any level from just the main points to the complete, detailed outline — so you never lose sight of the big picture. It's an efficient way to work on long reports, proposals, speeches or any complex writing project.

Idea Generators. Macintosh software can even help you with the new ideas you need to make your business prosper. These programs ask you a series of probing questions about your business challenges and encourage you to look at each situation from a different angle. Stuck for a name for a new product? Having trouble marketing a new service? Idea generators won't give you the answers — but they'll help you come up with new ideas.

Marketing Materials and Presentations.

With a Macintosh on your desk, you can create persuasive and memorable sales and marketing materials. You can produce everything from presentations with slides and overheads to black and white newspaper ads to glossy, four-color brochures. Not only can you save time and money by doing it yourself, but you can also make last-minute changes that used to be impossible.



Desktop Publishing. Whether you're creating annual reports, flyers, newsletters, brochures, proposals, newspaper ads or in-store signs, take a look at desktop publishing software.

Desktop publishing programs let you print bold headlines, wrap text around graphics and add scores of special effects to your documents. And you don't need to be an artist because graphics and drawing tools are built into the programs. You can even put photographs into the computer with a scanner. Modify and retouch them right on-screen and incorporate them in your work. Copy can be easily formatted into columns for a professional look. And you'll have the flexibility to easily make changes until you achieve the quality you want.

From new business proposals to product brochures, desktop publishing software can help anyone prepare more creative and effective marketing materials. And by producing them in-house, you'll get the first-rate results you want in far less time than ever before.

Presentation Programs. When you're ready to share your ideas with your colleagues or your clients, use one of the many presentation applications available for Macintosh. These programs help you combine text and graphics into a series of charts and pointers you can string together into an on-screen presentation. Process onto 35mm slides. Print out on transparencies. Or print on paper.

Presentation programs come with built-in graphic tools that make it easy for anyone to create professional results. Choose background colors and patterns, add charts and graphs to illustrate points, change typestyles and add drawings.

With a Macintosh you can even take presentations to new heights. Add a soundtrack for a consistent, professional presentation time after time. Or use colorful animation to make a point or show how a product works. With Macintosh, you can easily customize all

your presentations to your subject and your audience. Whatever medium you choose, Macintosh will help you find richer and better ways to communicate.

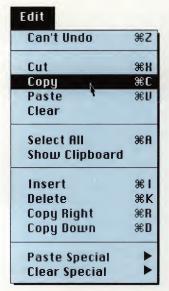
General Software and Specialized Software.

Some software — like the programs above for bookkeeping, outlining, data backup, word processing and so on — can be used in virtually any business. Other software is designed specifically for particular functions or industries. Thousands of the most innovative programs in the world have been written for Macintosh. To see some examples of general business and specialized applications, turn to the software lists in Section III of this Guide.

For more information about Macintosh applications visit your local authorized Apple reseller.



With Macintosh software, menus are consistent in every application. You'll find the Cut, Copy and Paste commands in the same place every time.



A target marketing program.

Edit	
Can't Undo	
Cut	жн
Copy	жc
Paste	₩ U
Clear	
Select All	₩A

New Record	3€N
Duplicate Record	₩D
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Delete Found Set	
Paste Special	>
Replace	9€=
Relookup	
Check Spelling	>

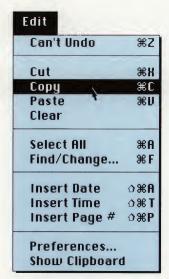
A database program.

Edit	
Cannot undo	₩Z
Cut	жн
Copy N	ЖC
Paste *	₩U
Clear	
Select All	₩A
Find	%8
Find next	ж,
Change	₩9
Spelling	₩L
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Edit Story	3€E

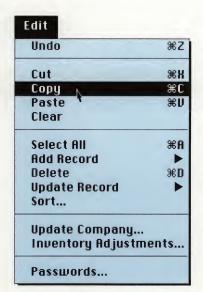
A desktop publishing program.

Edit	
Can't Undo	₩Z
Cut	жн
Copy	ЖC
Paste *	ЖU
Clear	₩B
Delete	жκ
Insert	361
Fill Right	₩R
Fill Down	₩D

A spreadsbeet program.



A word processing program.



An accounting program.

When Macintosh was first introduced in 1984, it drew attention for its unique graphical interface. And today, other computers seem to be imitating the Macintosh appearance. But more and more people are discovering why a "graphical" shell grafted onto a character-based system just isn't the same thing. They've found that a computer that *looks* like a Macintosh won't necessarily work like a Macintosh.

Because a Macintosh is more than just icons, a mouse and a friendly greeting when you turn it on. The unique power of a Macintosh comes from the way it was conceived and built. From the chips up, it was designed to work the way a true personal computer should: intuitively and visually. And you can't graft that kind of power onto an old style computer. What's more, Macintosh offers a wide range of applications for virtually every business need.

A recent independent survey shows that both MIS managers and computer users are more satisfied with Macintosh than with other personal computers. They also give Macintosh systems a much stronger purchase recommendation than either MS-DOS® or Microsoft® Windows™ systems.**

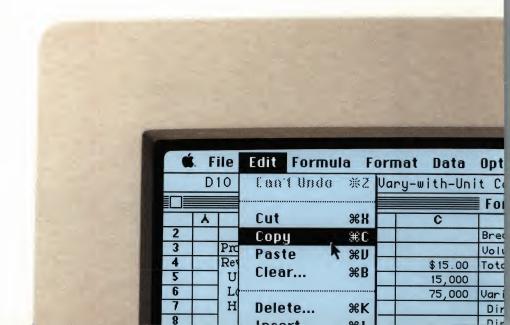
Here are specific reasons why Macintosh is the ideal computer for small businesses.

Macintosh Is Easy to Learn and Use. All Macintosh applications work alike, so once you've automated your first business task, you can tackle other areas without starting back at square one. No other computer offers complete consistency across all applications. With Macintosh, the same keystrokes that cut and paste a

paragraph in your word processor, will cut and paste a block of numbers in a spreadsheet — or a design in a graphics program.

This ease-of-use in going from one program to another will let you cut training time and costs dramatically. What's more, consistency makes it easy for infrequent computer users to remember what to do between work sessions. And it encourages daily users to try new applications enthusiastically.

*Diagnostic Research, Inc., 1990



To move copy or graphics from one place to another, use the Edit menu.

File Edit Font

Espit Unde

Cut
Copy
Paste

Choose Cut.

Edit Font Size

Enait Undo

Cut

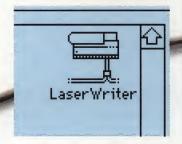
Copy

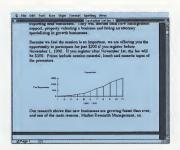
Paste

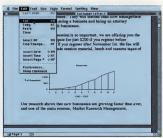
Paste selected text or graphics wherever you want it to be.

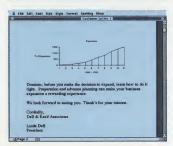
Cut
Copy
Paste
Clear
Select All
Find/Change...

Print your work on an Apple LaserWriter® for a consistent, professional look.











How much easier is a Macintosh to use? According to MIS managers' ratings, MS-DOS and Windows systems require about twice as many training hours and up to two-and-a-half times the training costs of Macintosh systems.*

Macintosh Shares Data Easily. With Macintosh, you can easily exchange data between files and, more importantly, between users. This means it's easy to grab some numbers from your accounting program and drop them into a spreadsheet to create various "what if?" scenarios. For example, what if you raised a price 5%? Or what if you leased a new piece of equipment rather than bought it? You can also share data between other kinds of programs just as easily. You can create your company logo in a graphics program and paste it onto your letterhead in a word processing program.

*Diagnostic Research, Inc., 1990.

Additionally, every Macintosh computer comes with built-in networking capabilities. This gives you the ability to easily connect computers so they can share files, applications, printers and more. Networking on other computers can be expensive, complicated and time-consuming.

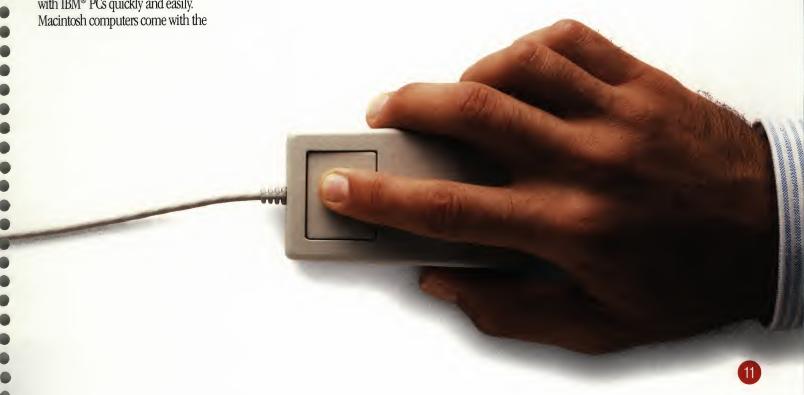
Add a modem and the appropriate software, and you can even tap into large national databases and services like MLS,* WestLaw,* Lexus* and CompuServe.*

Macintosh Is Compatible. With Macintosh, you can also share data with IBM® PCs quickly and easily. Macintosh computers come with the

Apple SuperDrive™ disk drive that can read from and write to MS-DOS, OS/2® and Apple II® computer file formats on industry-standard 3.5 inch floppy disks. This means you can easily use client or customer files in your Macintosh applications. With the appropriate software, you can find and manipulate MS-DOS files just as you would Macintosh files, using familiar point and click actions. You can even run MS-DOS programs on your Macintosh, if you wish. In most cases though, you'll just import the files and incorporate that data into your easy-to-use Macintosh programs.

Macintosh Lets You Work on Many Jobs at Once. What if you had to put away your calculator before you could use your stapler or answer the phone? You wouldn't be able to run your business very efficiently. Yet most computers insist that you finish one task before you start another. Macintosh lets you work the way you're used to working, with several projects going at once.

If you're in the middle of writing a letter when a customer calls to check on her



Every Macintosh comes with a disk that teaches you how to use it in minutes.



balance due, you can open your customer database without shutting down your word processor. Or you can bring data from your accounting program into a spreadsheet program to create a chart. Then copy that chart and paste it into a report in word processing, with all three programs still open on your screen. It's something you'd take for granted, unless you bought a computer incapable of doing more than one job at a time.

A recent independent study concluded that Macintosh users rate their systems significantly higher than both MS-DOS and Windows users on "performance as a business tool", "versatility", and the ability to run many different applications."

Macintosh Is Simple to Setup and Install. Macintosh works right out of the box: there are no configuration switches to set, no complex connections to make. Cables are clearly labeled with icons (pictorial repesentations) so there's no confusion. If you've ever tried to set up any other computer, you'll appreciate this simple approach. You can even connect several Macintosh computers to the same printer without any special hardware or software since networking is built into every Macintosh. In fact, you may find that one printer will serve your entire office. And with everyone sharing a printer, you save money.

Once everything is set up, all you do is insert a disk to start the simple training course that Apple includes with every machine. Then, when you're ready to get to work, you'll find that installing

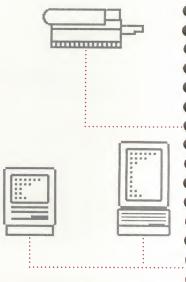
software is as simple as installing hardware. With Macintosh, there's no need to configure your software for different printers or different screen resolutions.

But don't take our word for it. A recent independent study asked information managers and business people who work on Macintosh, MS-DOS and Windows to rate their systems in key areas. Macintosh was rated easier to install, learn and use.*

Macintosh Is Easily Customized.

Macintosh lets you work the way you want. Not the way a computer says you have to. With a Macintosh, you can have it your way, in dozens of small but compelling ways. For example, you can easily adjust the response speed of your mouse and keyboard or even change the colors and patterns you see on screen.

*Diagnostic Research, Inc., 1990.



You can add special utility programs to your work environment without any technical knowledge, as easily as you can add a plant or a picture of the kids to your desk.

Some other computers insist that you change your habits to suit them. But Macintosh changes to suit *your* preferences. The final effect? With Macintosh, you can spend less time thinking about running the computer and concentrate on running your business.

Macintosh Will Grow with You.
As your business grows, so can your
Macintosh computers. The Macintosh
you buy today won't become obsolete as
your needs change. Expansion slots
allow you to easily add more memory or
a variety of high-performance devices
for specialized tasks. You might want to

handle more data, run more sophisticated software programs or simply work faster. You could add a portrait monitor or a two-page monitor and scanner for desktop publishing projects. And remember, as your systems grow or you add more computers to your network, you can still use the same software and data you used on your first Macintosh. Because Apple works closely with developers to ensure that new software works with original versions, you never have to lose the work you've already completed.

Macintosh Is a Sound Investment. Research by the Gartner Group and other respected consulting firms concludes that Macintosh systems provide superior price/performance value in terms of overall life cycle costs and full system capabilities.

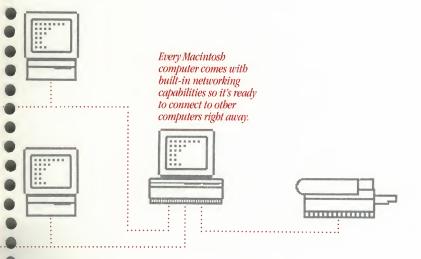
The study showed that Macintosh systems are ultimately less expensive than other personal computer systems because training costs, networking costs and overall support costs are much lower. Macintosh also has more built-in features than other personal computers, so Macintosh users can do more for less money. And when users are ready to upgrade their systems, Macintosh provides a cost effective growth path.*

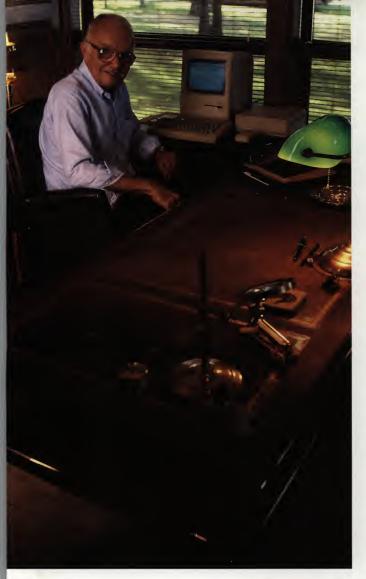
Numerous studies indicate that Macintosh users are more productive, efficient and effective than users of competing platforms. In fact, in an independent study, MIS managers rated productivity on Macintosh systems 37% higher than on MS-DOS systems and 32% higher than on Windows systems.** Imagine how that can affect your bottom line.



^{**}Diagnostic Research, Inc., 1990.







Reed uses his Macintosh for everything from correspondence to cost projections to bookeeping.

Lone Star Consultant.

Donald Reed, President ReedCo, International Willis, Texas

"Using a computer is a mental block for too many executive types. And I think that's sad," says Donald Reed, president of ReedCo, International, a consulting firm that assists foreign companies in marketing, building factories and overhaul facilities and putting service organizations together. Reed traded the corporate office life for his home library-office with a lake view near Houston. "If it weren't for the Macintosh, I couldn't really operate my business out of my office at home."

"I've always been a principal in a company and had an accomplished personal secretary. But I find that by using the Macintosh, it takes me less time to get a letter or report to a finished product. The Macintosh saves me from \$18,000 to \$25,000 a year because I do not need a secretary. And since I do my company books, I do not have to hire an accountant either."

"I deal in capital goods which are big dollar items. My work has to look good for clients. The Macintosh produces really excellent appearing correspondence and reports. I'm not an expert typist by any means — I hunt and peck. But I've designed several letterheads and have them stored in the computer. My work looks like it comes out of a 40 story building."

In addition to word processing, Reed uses his Macintosh spreadsheet capabilities for bookkeeping, reports, pro formas and projections. "You enter numbers once, then try different scenarios. What if inflation is real high? What if oil prices go from \$18 to \$25 in one week? Or even \$50? I can project what will happen if currency is devalued in a country and can see the differences in today's dollars."

"In every deal I've done, I've always had to invent ways to do it. I can get with the computer and develop a strong feeling for the sweet spot in a deal. The computer doesn't spit out an answer. But it lets me make assumptions, try extremes. What emerges is an intuitive feeling for doing the final deal."

When he needs to bounce ideas off someone else, the Macintosh becomes his silent partner. "When I'm going into a new business situation, I do a sort of monologue with my Macintosh. I type in all my thoughts, print them out and then I challenge them. It moves me beyond the usual limits of one's thinking."

"I could not do my business today without a Macintosh."

It's in the Mail.

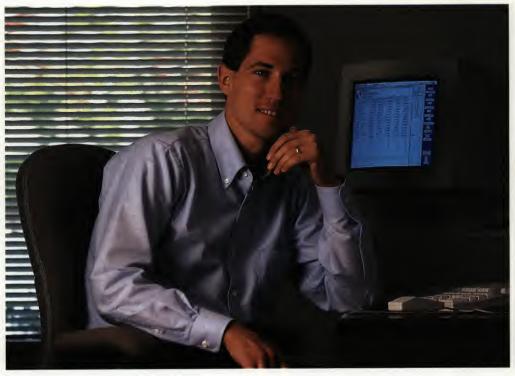
Carl Pihl, Production Manager National Direct Marketing Newport Beach, California

People who are in charge of huge direct mail programs where results can be measured to the penny rely on experts to develop, track and implement their direct mail projects. And enough choose the people at National Direct Marketing (NDM) to keep 31 Macintosh computers busy all the time.

"I'm a Macintosh convert," says Carl Pihl, production manager at NDM. "I fought the Macintosh at first, opting for IBM.

After three years of using IBM, I was reluctant to start over with a new system. But now I'd never go back. People practically train themselves. They used to get so frustrated learning the IBM system. It's like learning to speak all over again. But with Macintosh, you just point and click. Everyone understands that. You can copy a file or throw it away without memorizing instructions on how to do it."

Since their products are printed materials, NDM uses desktop publishing, word processing, illustration and paint programs extensively. "Before the Macintosh computers, everything was done manually," continues Pihl. "We used to send out for type which cost us around \$100,000 a year. Now, we do it all in-house."



Pihl feels NDM's database programs help the company make money on every project. With Macintosh, NDM can track job costs closely and pull reports at any time to check the initial estimate, current estimate and actual costs. When the project's finished, the database program takes these costs, adds the agency's commission and generates invoices. The invoices feed directly into the accounting program, so the final profit is quickly apparent.

"Our mission-critical information is more accurate than it ever was in the past. Now, we can present a more knowledge-

able face to our customers. Plus, the information we can collect on our database has residual usefulness for analysis. For example, we track direct mail response and include that information in reports."

"We chose the Macintosh computers because they were easy to use. And they are. But the bottom line is this: Macintosh allows fewer people to do more, better." National Direct Marketing uses high performance Macintosh computers to run sophisticated desktop publishing and graphics programs.



Law. And Order.
Pamela Pierson, Attorney
Pierson and Toben, law firm
San Francisco, California

"When we started our firm two years ago, we had to start work the day we opened. None of us had ever operated a Macintosh before. But we had no problem getting organized, getting our work done and getting it out from day one."

Pam Pierson and her partner, Melissa Toben, have a family law practice in San Francisco. "We're very computerized," observes Pierson. "We do everything on the computer—all our letters, judicial council forms, agreements, promissory notes, all formal discovery—everything that's filed with the court is done on computer." The firm now has four people using four Macintosh computers, all networked.

Most of the firm's work is handled by word processing software, but they also use spreadsheets, do time and billings, create forms and keep a master calendar which reminds them of appointments. "Macintosh is so easy to use," says Pierson. "Except for the spreadsheet program, I haven't had to read manuals. We started with word processing and now we're using at least eight different programs."

Two of these are specifically designed for family law practice. "One program helps me calculate support payments in many different ways. I use it for all support calculations. The other lets me do legal research on my Macintosh. For example, I recently needed to determine whether the court still had jurisdiction to extend my client's rights to receive spousal support. I sat down at the computer, found synopses on all the relevant cases—there were 10 or 15—and then could find the ones I needed in our library."

"I use the computer system more now and more efficiently than when I was using IBM equipment. It's easy to move around. With MultiFinder®, I can move quickly from one program to another."

Pierson credits the Macintosh computers for allowing her to provide better service for her clients. "Without a doubt, I'm faster. Once I was working with another attorney on a dispute. We reached an agreement verbally. Right there, I typed out the agreement. Within 15 minutes I had a finished document to sign." Working more efficiently improves the bottom line, too. "When you're a service business, billing hourly, being more productive means being more profitable."

Their networked Macintosh computer system speeds everything up. "I think the facility with which I use the computer gives me an advantage. I can get things out quickly. There's no time delay between what comes out of my head and what goes out of the office. Secretaries' time is used more efficiently. They can do better things than typing letters. I would definitely need to add one full time person, maybe one and a half, if we didn't have the computers."



Professional-looking documents are produced instantly at Pierson and Toben.

The Factory Maker.

George Todt, Öwner Todt Industrial Cape Girardeau, Missouri

When a company wants to build a factory, Todt can do it all. They design the manufacturing flow for the line, the electrical system and all the equipment. For over 40 years, they've designed and built everything from food processing equipment to flying cutoff machines for the styrofoam industry. "We do more than just design equipment," says George Todt, owner. "We also manufacture conveyers, build buildings, put in the road and provide for maintenance." Their clients have ranged from makers of housing, clothing and mining equipment to rock quarries and grain elevators.

Todt bought the company three and a half years ago. In their first year of business they doubled their sales. "To have a company growing that fast on a manual system would have gotten out of hand," he notes. "I wouldn't have had the knowledge or control that I needed."

Initially, Todt tried an IBM computer system, but was dissatisfied. "People just didn't use it. They didn't learn it. The format was so structured, they didn't have the flexibility to get exactly what they wanted. It was always a compromise. We had to run our business to the structure of the computer. Instead of the computer fitting our business."

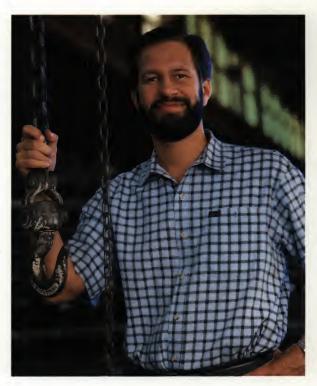
An engineer friend recommended Macintosh and an accounting program and that proved to be the solution. "I had no need to hire a consultant or an information manager to install the Macintosh system. My bookkeeper was able to get the entire office up and running in two days. Now 12 people, using a file server, handle our payroll, accounts payable, general ledger, job scheduling and production control."

In addition to accounting, Todt relies on Macintosh computers for engineering design, project management, information management, financial analysis and word processing. And their Macintosh databases track 12,000 inventory items and over 3,000 customers.

"We've calculated as much as 30% savings on projects due to our ability to manage projects better and to predict what's going to happen when. We used to have to wait a month for information. Now we can watch it daily. If we see a problem area—costs going over, for example—we can put our attention to it immediately."

Inter-company communication has improved dramatically as well. "Our employees don't even talk to each other anymore. They just 'mail' everything on the computer."

"The important thing is having access to information. We do so many different things with the Macintosh. Today, we have tremendous control."







The equipment Todt manufactures is designed on powerful Macintosh computers running state-of-theart engineering design programs.



Macintosh will soon help Windmill Properties turn this desert into a busy shopping mall.

Mall Matchmakers.

Robert Levyssohn Windmill Properties, Inc. Rancho Cucamonga, California

When a shopping mall is created, someone has to put retailers together with property owners before cash registers can start to ring. That's Windmill Properties' specialty and their business is growing with the help of Macintosh computers.

"I used to work on IBM PCs and mainframes at a national fast food chain," says Robert Levyssohn, a co-owner of Windmill Properties. "But I had a terrible time remembering all the codes and commands."

"A computer has to be as simple to use as possible. The Macintosh is. What it has allowed us to do is focus on what we need to get done, not on how to manipulate a program to do it."

One of the deciding factors in choosing Macintosh computers for Windmill was the ability to easily move back and forth between programs. Their databases contain thousands of names. But they can quickly select the ones they want and merge them with letters or other documents for personalized mailings.

"Suppose we want to find a shoe store and a restaurant to be tenants in a particular location. We can send a mailing to all the shoe stores and restaurants in our database and personalize it with each person's name and store type. These mailings are very effective and are vital to our success."

To keep on top of the fast changing real estate scene, Levyssohn and his partner, Howard Burns, use a modem to access a commercial on-line real estate information service called DAMAR." "Of the five projects we've got going now, we got three of them by contacting owners through the DAMAR system," says Levyssohn. Modems also allow Burns to work on a Macintosh at home, in another town, two days a week and still access all the files in the office.

"We also do all our accounting on the Macintosh, including profit and loss statements, balance sheets and all our bookkeeping. And we use spreadsheets a lot, too," adds Levyssohn. "It's easy to make small changes in project pro formas which banks require for loans. If I couldn't make those changes on spreadsheets, I'd definitely have to hire another employee and we don't want to do that. We're a three-person business and we want to stay that way."

"We use Macintosh computers for everything. If we didn't have them, we just wouldn't have this business. It's that simple."

Bye, Bye, Bills.

David Fox Boleyn, President Medical Bill Management, Inc. Washington, D.C.

Most people feel well when they leave the hospital. But later, dealing with medical bills by the yard and endless insurance claims is enough to make them ill all over again. In 1986, David Boleyn decided to do something about it. He founded Medical Bill Management, Inc. (MBM), a Washington, D.C.-based company that handles all medical bill paperwork for insured individuals.

"If an individual has three insurance companies, has seen several doctors and has medical bills of \$10,000, we'll track through all three insurance providers. With Macintosh computers, we can cut letters at the click of a mouse to get the historical, itemized billing statements we need. Then, we'll file all the forms and follow up with whatever else is needed. Finally, when the dust has settled, we can cut a check on the computer at the press of a button to the provider to pay the balance due. The client never has to see a piece of paper."

Boleyn, with a staff of only five, relies heavily on HyperCard® to keep track of

the mountains of data required for these services. HyperCard is an authoring tool and information organizer that comes free with every Macintosh. "We need to keep track of several thousand doctors, several hundred insurance companies and hundreds of clients. HyperCard may not technically be a 'relational database', but it sure functions that way for our purposes. I'm astounded at what the Macintosh can do in conjunction with HyperCard and the LaserWriter printer."

"We use a word processing program and data from HyperCard to create customized letters for our clients," Boleyn says. "And in addition to the brochures we're producing now, we plan to start a newsletter soon to market our services." Other software used by MBM includes an accounting program and spreadsheets to analyze clients' financial data.

The reporting capabilities of Macintosh computers are also important. MBM produces comprehensive reports which list medical services, bills and corresponding insurance benefits in chronological order. They also produce easy-to-read quarterly statements on bills, claims and benefits. "These reports are the tangible representation of our product to the customer," Boleyn explains. "They contain a wealth of information including the status of any claim, when it was filed, when paid, the amount, to whom, pending subsequent activity and more. This business simply couldn't be done without our computers."

"We chose Macintosh because people can become more productive in a shorter period of time. And that meant our business could be more profitable more quickly. I was able to start this business because of the affordability and accessibility of Macintosh computers."

"The computer is our business, as opposed to helping us do our business. If a computer is that integral to your business and you depend on it for your productivity and profit ... get a Macintosh."

Thanks to Macintosh computers and Medical Bill Management, a hospital stay doesn't have to cause beadaches after you get home.



By now we're sure that you can see how a Macintosh could be an invaluable tool and an important investment for your business. If you feel you need more information before you proceed though, here are a few suggestions:

Try Out a Macintosh. Your authorized Apple reseller can help you run a simple tutorial that introduces you to basic Macintosh operations. While you're there, ask for a demonstration of the software suited for your business.

Visit a Business That's Already Using Macintosh. Your authorized Apple reseller will be glad to tell you about other businesses in your community that are already increasing their productivity with Macintosh. Stop by and find out how their businesses have changed since they bought their Macintosh computers.

Get a Consultant. Apple Computer provides qualified independent systems consultants with the information they need to make the best possible recommendations to their clients who use Apple computers. They can give you professional help when choosing the hardware

and software best suited for your business. They can also work directly with you to help design and develop your information processing strategy for the future. Ask your authorized Apple reseller to recommend an Apple Consultant Relations specialist (or contact the Apple Sales Office in your area).

Attend a Meeting of Your Local Macintosh User's Group. One place to find other businesses using Macintosh is at a user's group. User's groups are informal gatherings where computer users exchange tips and information and help each other out. No need to be an expert: most user's groups bend over backwards to keep their meetings understandable to new computer users. Call 1-800-538-9696, extension 500, to find the user's group nearest you. Or ask your authorized Apple reseller.

Contact Your Professional Trade or Industry Association. Whether you're a builder, a lawyer, or a realtor, your professional association probably keeps up with what's new in computers in your field. Check your trade publications or attend a convention to find out how your colleagues are using Macintosh computers.

Attend a Macintosh Exposition.

Macintosh computer shows are held across the country in many locations. Two of the largest shows are the Macworld® Expo's held in San Francisco and in Boston. Browse the show floor for demos of products that might interest you or sign up for informative seminars and conferences. Call (617) 361-8000 for more information about Macworld Expo.

Read Books and Magazines. Some publications are filled with computer jargon that may seem intimidating to new users. Other books and magazines can be very helpful if you're just getting started. Take a look at our Reference Guide in Section III for a few suggestions.

Visit Your Authorized Apple Reseller. Once you have all the information you need, talk to your reseller. Ask about seminars for businesses like yours. Before you visit your reseller though, take a few minutes to fill out the Computer Needs Questionnaire on the next page. Then take it with you to help your authorized Apple reseller understand your needs and determine the best Macintosh solution for your business.



Computer Needs Questionnaire.

Your authorized Apple reseller will ask you questions about your needs to help	3. How many locations does your business have?	7. Please identify how you currently accomplish the following:			
you choose the best computer solutions	□one		Manually	On Our Own	Service
for your business. You can speed the pro-	□ more than one	Accounting		Computers	Bureau
cess along by taking the time up front to start thinking about your needs and the way you do business. Use this list to help you determine what you want a com-	4. Approximately how many full-time employees currently work for you? □ none	general ledger accounts receivable accounts payable payroll			
puter to do. Then take it along with you when you meet with your authorized Apple reseller. 1. Please describe your company's	☐ 1 to 5 ☐ 6 to 19 ☐ 20 to 49 ☐ 50 to 99	financial analysis/ budgeting spreadsheets inventory order entry tax planning			
business.	□ 100 or more	-	_		
□ service □ manufacturer	5. Does more than one employee need to access the same information (e.g., an	Word Processing correspondence letters/memos			
□ retailer □ wholesaler	inventory, a customer database) at the same time? □yes □no 6. Briefly describe the kinds of services/products you offer your cus-	personalized form letters forms (e.g., invoices, templates) mailing labels proposals technical writing			
☐ other			, 		
your company currently own? (Check	tomers.	Marketing Mat	erials		
only one response.) □ none □ 1 □ 2 to 5 □ 6 to 10 □ 11 or more brand(s)		newsletters flyers brochures catalogs copywriting presentations video scripting video creation			
		Information Management tracking customers creating mailing lis tracking inventory sales management project managemen storing & filing information			



Computer Needs Questionnaire.

8. Will you be purchasing a personal computer(s) within the next 6 months? yes no don't know 9. What apprehensions do you have about installing a new computer system? (Check all that apply.) no apprehensions costs start-up time needed training required integration with other systems employee resistance system obsolescence other	10. What are your expectations? (Check all that apply.) □ speed up procedures we now do by hand □ make it easier to keep track of the bottom line □ let me avoid hiring extra people □ make my company more organized □ improve service to my customers □ help me create attractive sales and marketing materials □ make direct mail campaigns more effective □ save me money by:	11. Please refer to the Complete System section of this Guide and write down the Macintosh systems you are most interested in.		
	give me a competitive edge by:			
	other			

Which Macintosh?

Macintosh computers are easier to buy, install, and learn than any other computer. Yet, if you're new to computers, you'll still need to learn a few basic terms to help you understand your hardware and software options. There's really not too much to learn. Think of it this way: you can drive a car without knowing how to rebuild the carburetor—as long as you know enough to fill up the tank and check the oil. Similarly, you can use a computer without knowing everything about how it works, if you've got a basic overview of the parts.

If you're already familiar with the basic jargon and procedures of personal computers, skim this section quickly for review. Or go straight to the next section to learn more about Macintosh computer hardware.

A Few Key Terms: Bits and Bytes.

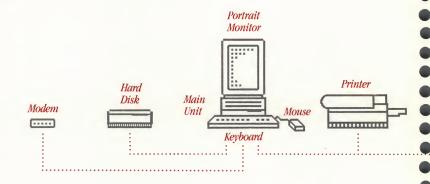
Let's say you press the letter A on the keyboard. Macintosh sends a signal to the main unit, which in turn sends a signal to the monitor to display the letter A. All these signals are in a special computer code that consists of nothing but on and off pulses of electricity. Each of these pulses is a bit. It takes eight bits together to form the letter A or any other character; this set of eight bits is called a byte. Computer memory and disk storage are measured in bytes, in kilobytes (a thousand bytes) and in megabytes (a million bytes).

All About Hardware.

Before you're ready to shop for a computer, it helps to understand all the different parts that make up a computer. These parts are very similar on all computers, but of course we'll use Macintosh as our example. Refer to the illustration below.

Main Unit. The main unit contains the "engine" of the computer. The main unit is made up of several components including:

- The CPU or Central Processing Unit. This is a single computer chip that acts as the brain of your Macintosh. It's so important to the computer that you'll sometimes hear the whole main unit referred to simply as "the CPU".
- •RAM or Memory Chips. Several computer chips provide temporary storage for your work whenever the computer is running. Macintosh comes with a minimum of one megabyte of temporary storage. But you can expand memory storage to eight megabytes as your needs grow. The important thing to know about RAM is that it depends on electricity to store information. When you turn off any computer, RAM is automatically erased. That's why you need permanent storage, or disk drives.



- Hard Disk Drive. A hard disk drive is a device with large storage capacity. Standard hard drives hold 20-80 megabytes of data. But other sizes are available, too. Hard disk drives can be inside the main unit (where they can't be seen) or outside the main unit.
- Disk Drive. All Macintosh computers have one or two disk drives. Generally you'll store your programs and your data on a hard disk, but you'll still need at least one disk drive. Software you buy comes on disks that you'll need to copy to your hard disk. And you may choose to use disks to make extra copies of your important work. Apple SuperDrive is standard on all Macintosh computers and holds 1.44 megabytes (or roughly 705 typewritten pages).

When you record data on a disk, it's recorded magnetically, much like a tape cassette is recorded. Hard disks record data in virtually the same way.

• Ports. On the back of the main unit are several connectors known as ports. On a Macintosh, these ports are clearly labeled with icons so you can easily plug in your keyboard, mouse, monitor, power cord, printer cable and any extra accessories you need.

Keyboard. Apple offers both a standard keyboard and an extended keyboard. The standard keyboard is sufficient for most businesses. Advanced users and those who connect their Macintosh computers to mainframes or minicomputers may prefer the extended keyboard; its extra keys can be used for sophisticated shortcuts or to emulate other computer keyboards.

Mouse. Macintosh comes with its own mouse at no extra charge. A mouse is a small hand-held device which you use to give commands to your computer. You can attach the mouse to the main unit, or to the left or right side of the keyboard. As an option to the mouse, you might want to consider a trackball. A trackball is a stationary ball you roll with your fingers to move the cursor arrow on the screen.

Monitor. Compact Macintosh computers come with a 9 inch monitor included in the main unit. Modular Macintosh computers feature a separate monitor, so you can customize the computer to your specific needs. You can choose monochrome (black and white) or color monitors, in a wide range of sizes. (Shown at right)

External Hard Disk Drive. As discussed earlier, hard disks can be contained in the main unit or attached to the outside. Even if you have a hard disk drive inside your main unit, you may want to buy an external drive. A second hard drive is quicker and easier than using diskettes for making duplicate copies of your important data.



Standard size: displays about twotbirds of a page



Portrait: displays one full page



Two-page: displays two full pages





You can connect peripberals to your Macintosh system in a matter of minutes.

Computer Basics.

External drives come in two main options: the usual sealed box and one that features removable cartridges. These cartridges hold at least 45 megabytes of data; as one fills up, you simply insert another. Removable cartridges offer a dependable system for keeping duplicates of essential data like customer lists or accounts receivables off-site, to guard against theft or fire. They're also frequently used for CAD/CAM or sophisticated graphics programs that call for storage of large amounts of data.

Printer: Printers widely used in business are of three main types: dot matrix, ink jet and laser. Dot matrix printers are the least expensive. They make letters and numbers on paper by pushing little pins into an inked ribbon which transfers characters onto the page. Dot matrix printers are important for multi-part forms. Otherwise, they are primarily for in-house work where sharp graphics and print quality are not critical.

Ink jet printers force droplets of ink through tiny nozzles to form letters. They're faster, and very quiet—but more expensive, and their ink can sometimes smudge.

Laser printers are favored by most businesses. Laser printers work like personal copiers, using heat and pressure to fuse toner onto paper. While they are the most expensive option, laser printers come in many models to suit your business budget. And, since most Macintosh computers can share the same laser printer, the cost may be less than you think. Laser printers are quiet and fast, and produce the highest quality output.

Modem. A modem changes computer signals into phone signals, and back again. If you plan to send data to a client or a branch office, or receive data from an on-line information service, you'll need a

modem. Modems are rated according to how much data they can process each second—a measure called *baud rate*. Slower modems work at 1,200 baud. Today, 2,400 baud is average, with 4,800 baud and 9,600 baud becoming more common. The speed you choose depends on your budget, on the quality of your phone lines and on the computers you'll be "talking" to. Just make sure your modem is "Hayes® compatible"—that it works according to the commonly accepted standard for modems.

Network. A computer network connects the computers in your business so they can work together efficiently. All Macintosh computers come with network capability built in at no extra charge. Most networks for printer sharing or simple file sharing require nothing more



than Apple's built-in networking and cables. If you have intensive network needs (for instance, if several employees must access the same customer database or inventory files at the same time) you may need to buy an extra Macintosh to act as a file server. A file server stores data files and applications which can be used by everyone in a work group or throughout the company. It speeds up your network extra charge. And this system makes all so your business will run more efficiently.

Beyond Hardware.

Just as a stereo is useless without records. a computer can do nothing to help your business without software. Software tells your computer how to carry out specific tasks. A few important-to-understand terms associated with Macintosh software include:

Operating System. Every computer must have an operating system. Much as your body's circulation and respiratory systems must be working before you can choose to read or hike or dance, a computer's operating system must be working before it can do word processing or accounting. Macintosh comes with its own operating system, included at no Macintosh software work consistently and easily.

Applications. You'll often hear Macintosh software referred to as "applications." If you're more accustomed to the word "programs" just remember the two words are pretty much interchangeable.

Specialized Applications. Some applications can be used in almost any business—like a word processing program, or a spreadsheet, or a billing program.

These applications are sometimes referred to as general or horizontal applications because of their wide range of use. Other applications are called specialized or vertical market applications because they are designed specifically for a narrowlydefined task or a specific industry. "Legal Billing" and "The Real Estate Edge™" for example, are vertical market solutions. Macintosh offers thousands of software choices, both in horizontal applications and in very specialized vertical applications designed for your specific line of work. (See lists of software in Section III of this Guide).

Data. Generally, this term refers to information you create yourself on the computer. Whenever you're working with your computer, three things will be loaded into its memory: the operating system, any application(s) you're using and any data you're working with.



Macintosh Computer Guide.

There's a complete range of Macintosh computers to fit every business need — from the entry-level Macintosh Classic® to the advanced, high performance Macintosh IIfx. So whatever your business needs, there are Macintosh computers that are ideal for the job. Here are some standard features you'll find on Macintosh computers:

Compatibility: Every Macintosh comes equipped with the Apple SuperDrive disk drive. With it, you can exchange information on a standard 3.5 inch floppy disk with MS-DOS, OS/2 and Apple II ProDOS® systems. So even if your clients or customers use a different system, you can easily use their data in your Macintosh programs. Or you can move information you generate to other types of computers.

In fact, with optional hardware or software, you can even run MS-DOS applications directly on your Macintosh—should the need ever arise.

Consistency: All Macintosh programs are designed to work in the same consistent, intuitive way. So once you've learned one program, you'll have learned the basics of using all other programs. This dramatically reduces learning and training time. What's more, every Macintosh model can run virtually all Macintosh software. So if you add new Macintosh models to your system in the future, you can continue to use the same programs and files.

Networking. Every Macintosh comes with a built-in networking system called AppleTalk.® This lets you share printers and files, set up work groups and

connect easily to other computer systems. Whether you're connecting 2 or 20 computers, you'll find AppleTalk easy to use, powerful and flexible enough to work in most environments.

Graphics. All Macintosh computers are built from the ground up to handle text and graphics with equal ease, so you can readily add graphic interest to all your documents, reports and marketing materials.

Easy to Connect. Connecting printers and modems is as easy as plugging a telephone into a wall jack. No complicated DIP switches to set or strange commands to learn. Cords and cables are clearly marked with icons that match those on the computer and peripherals.



Powerful System Software. System software determines a computer's "personality"— the way it handles basic operations. The Macintosh has set the standard in system software. Macintosh mixes the ease-of-use of a graphical interface with the power of MultiFinder to let you work on several tasks at once. System software and HyperCard (the innovative information management program) are included free with all Macintosh models.

Operating System Options. Many Macintosh models can run A/UX®, Apple Computer's version of the UNIX® operating system. This is a particular advantage for high-end engineering and technical applications. With an optional card, the Macintosh LC runs ProDOS,

allowing you to run thousands of Apple II programs. All models can run MS-DOS, which allows you the ability to run programs such as Lotus 1-2-3 and dBase IV.®

Built for the Future. The Macintosh computer you buy today is designed to take advantage of tomorrow's innovations. For example, every Macintosh model will support System Software Version 7.0 — the most powerful operating system Apple has ever developed. So you don't have to worry about any Macintosh becoming obsolete six months from now. What's more, every Macintosh in the entire line can add extra disk storage and memory when your future needs require it. It all adds up to more power, flexibility, ease-of-use and versatility than you'll find on any other

computer today. So the only hard part of your computer decision should be choosing the Macintosh computer that's right for your needs. This section of the Guide will help you do that by describing each Macintosh model. For detailed hardware specifications review the chart on page 35.

When selecting the right computer for your business, you'll want to think about the kinds of software programs you'll need to run. You'll also want to consider future expansion and your need for more power as your business grows. Your authorized Apple reseller will give you more information on any of the models described here.

Macintosh offers a full line of computers for every kind and size of business. Here's a range of models you can choose from and some of the types of uses each is best suited for. Ask your authorized Apple reseller for more information on any of these models.



Macintosh Classic

If you're looking for all the benefits of a Macintosh at a very affordable price, consider the Macintosh Classic. It's a great tool for basic office management functions such as billing, bookkeeping, correspondence, budgeting, project tracking, and customer list management.

Compact and transportable, the Macintosh Classic comes complete with a mouse, keyboard, 9 inch monochrome monitor, SuperDrive and system software. Plug in a printer and hard drive, and you've got a total business solution. You can also add a second SuperDrive or hard drive, and a modem to meet your specific business needs. The Macintosh Classic offers all the key Macintosh benefits, including powerful technology that's easy to use, access to thousands of applications that work consistently, built-in networking, and a smooth growth path.

Macintosh Classic: The completely integrated, most affordable Macintosh.



Macintosh LC

The most affordable *color* Macintosh, the Macintosh LC can handle all your basic productivity and office management tasks with ease. It has all the power you need for basic office management functions, plus a wide variety of specialized applications. Whether you run an office, or work out of your home office, you'll find the Macintosh LC an ideal entry-level color machine.

Macintosh LC takes the basic business muscle of the Macintosh Classic and adds. extra speed, processing information up to two times faster. Then it adds extra flexibility, with an internal expansion slot and a modular design that allows you to choose from a wide range of monitors and peripherals. Finally, the Macintosh LC opens up new options in color and sound, making it the best entry-level machine for developing presentations and for all types of drawing. It offers high quality graphics and the ability to work with a spectrum of 256 colors. What's more, the Macintosh LC can run Apple II ProDOS and DOS 3.3 (with an optional card), MS-DOS and Macintosh operating systems.

Macintosh LC: A low-cost business machine with color pizazz.



Macintosh IIsi

Small businesses needing more power will choose the Macintosh IIsi for mid-range Macintosh performance. If your business requires more demanding applications, such as midrange accounting, large databases or desktop publishing, the Macintosh IIsi will have enough power to meet your business needs.

The Macintosh IIsi runs applications up to four times faster than the Macintosh Classic thanks to its 68030 processor running at 20 megahertz. It supports a variety of monitors including a full page display — a useful advantage to anyone who does heavy typing or document design.

The Macintosh IIsi has all the color and features of the Macintosh LC plus the extra power and expandability you may need as your business grows. Its memory can be expanded to up to 17 megabytes an important plus if you work on several different projects at once. Its optional NuBus™ expansion slot allows you to customize the Macintosh IIsi to meet your needs for faster processing, high-speed networking, and internal modems.

Macintosh IIsi: A mid-range computer with color, greater speed, power and expansion options.



Macintosh SE/30

Macintosh SE/30 is the size of the Macintosh Classic, but with power and speed comparable to the Macintosh IIsi. Its compact design takes up little space and makes it easily transportable. Yet it has the power to handle a broad range of tasks from database management and word processing to sophisticated accounting applications.

Behind the built-in 9 inch monochrome screen of the SE/30 lies Macintosh's fast processor, the 68030 chip. Boosting the machine's performance even further is a math coprocessor for raw number and data-crunching power. The Macintosh SE/30 will grow with your business too. You can add up to 8 megabytes of memory and a hard disk that will store up to 80 megabytes of data. And, you can use the machine's expansion slot to add an internal modem or high-speed networking card, allowing you to connect with various types of computers (including mini-computers and mainframes).

Macintosh SE/30: No-nonsense efficiency for small business.



Macintosh Portable

If you find yourself working at more than one desktop, the Macintosh Portable could be the perfect solution for your business needs. The Portable is an all-in-one system that runs all the standard business programs you'd run on any other Macintosh. Yet it gives you the freedom to work wherever you need to.

The Macintosh Portable runs at nearly twice the speed of the Macintosh Classic. Its page-width screen uses state-of-the-art Active Matrix technology for crisp viewing from any angle. It features a standard Macintosh keyboard and a powerful battery that will run from 6-12 hours on a single charge. The Macintosh Portable has built-in networking and plugs easily into any Macintosh peripheral — including a wide variety of external monitors.

No matter where you take the Macintosh Portable, you'll always find it set up the way you want it with the most current version of all your work at your fingertips. It might just be the best way to meet your computer needs in a single, portable package.

Macintosh Portable: Perfect on the road or in the office.



Macintosh Ilci

For small businesses with advanced needs, the Macintosh IIci offers high performance and fast operation. It's an ideal machine for powerful productivity software (accounting, word processing, database programs) as well as for specialized design and graphics applications.

The Macintosh IIci adds extra muscle for your toughest jobs. If you work with large spreadsheets, complex architectural or engineering designs, or professional-level graphics and animation, you'll welcome the extra speed and expandability of the Macintosh IIci. Choose from any of Apple's photographic-quality monitors. With 3 NuBus slots, the Macintosh IIci offers you even greater expansion capabilities than the Macintosh IIsi. And by installing a cache card, you can increase the overall performance of most applications by as much as 50 percent.

Macintosh IIci: Expandable with color and power for the demanding needs of small businesses.



Macintosh Ilfx

Created to handle sophisticated functions requiring top-of-the-line technology, the Macintosh IIfx is the most powerful, advanced Macintosh ever designed. If you require highly sophisticated graphics capabilities and large disk storage capacity (for such things as 3-D rendering and animation), this computer can satisfy your needs. Of course, it will run all your business applications faster, especially when saving and retrieving information.

The Macintosh IIfx comes with 4 megabytes of memory and the fastest processor at 40 megahertz. It's also the most expandable model Apple offers, with 6 NuBus slots and a Processor Direct Slot. The Macintosh IIfx is completely modular. You can decide how much memory, which high resolution monitor, and what size hard drive to add, to meet the exact needs of your business.

Macintosh IIfx: The fastest, most advanced Macintosh available.

Macintosh Hardware Specifications.

With so many Macintosh computers to choose from, you might want to refer to the summary table on page 35 to compare features of each model. Explanations of the terms used in the table are listed below. If you find any additional unfamiliar terms as you read along, review the Computer Basics section, or check the glossary near the end of this Guide.

Macintosh Features.

Main Unit. Macintosh models are either compact (small, with a built-in 9 inch monitor), modular or portable. A modular Macintosh is a desktop unit to which you add your choice of monitor. The Macintosh Portable consists of a keyboard, screen and main unit all in one portable case.

Processor: Macintosh uses one of four different processors from the Motorola® 68000 "family" of processors: the Motorola 68000, the CMOS 68000 (a special low-energy version of the 68000), the 68020, or the 68030. These four chips process data at different speeds: a higher number means a faster chip. What's more, each chip has been "tuned" to work at a

specific speed, measured in megahertz. Look for a faster chip tuned to a faster speed if you'll be doing intensive graphics work or working with very large amounts of data.

Coprocessor. Some Macintosh models add an extra processor, the 68882 math coprocessor chip, to speed math-intensive graphics manipulation and calculation.

PMMU. Another specialized chip, the Paged Memory Management Unit helps users take advantage of some of Macintosh computer's more advanced features, including virtual memory (a way of using spare hard disk space as extra RAM).



In addition, the PMMU is required to handle the multi-tasking operation of A/UX, Apple Computer's version of the UNIX operating system.

Memory. Depending on the model, Macintosh comes with 1 to 4 megabytes of memory (RAM). Extra memory can be added to all models — the amount varying from model to model. Be sure to consider your expansion needs.

Disk Drives. All new Macintosh computers have a single 3.5 inch SuperDrive floppy disk drive as standard equipment. The SuperDrive holds 1.44 megabytes of data, and can read Macintosh, MS-DOS, OS/2, and Apple II data on 3.5 inch floppy disks.

Hard Drive. An internal hard disk drive is an option with all Macintosh models. External hard drives can also be attached to any Macintosh. A hard drive, because of the additional speed and storage capacity it offers, is essential to a business computer. Hard drives come in several capacities, including 40, 80 and 160 megabytes, so you can select the capacity that best fits your needs. Hard disks are like file cabinets: the amount of space you need depends on how often you clean out unneeded files and on the size of the files you store. 40 megabytes will be sufficient for many businesses, but you'll need more if you store many files with sound or complex graphics.

Monitor. The Macintosh Classic, SE/30 and the Macintosh Portable come with their own integral monitor. Other models

are designed with several monitor options so you can select the one that meets your needs.

Expansion Slots. Expansion slots allow you to add circuit boards (called cards) to your Macintosh to customize it with special capabilities. Macintosh uses two kinds of slots: the NuBus slot, the industrystandard high performance bus architecture; and the PDS (Processor Direct Slot), which allows a maximum of 1 card to talk directly to the processor. (There are varieties of Processor Direct Slots for each version of the 68000, including 68000 PDS, 020 Direct and 030 Direct). If you need specialized boards for high-speed networking, data-logging or any other function, pick a Macintosh model that has the number of slots and type of slots that you require.



Ports. Several standard connectors, or ports, are found on Macintosh models. Check to make sure the models you're considering contain the ports you need. They include:

- Floppy Port For an external floppy disk drive.
- RS-232/RS-422 Serial Ports For modems, printers and some network cabling. All Macintosh serial ports use the RS-232/RS-422 standard.
- ADB or Apple Desktop Bus Port For input devices like keyboards, mice, trackballs, graphic tablets and modems.
- SCSI Port "Small Computer Systems Interface" a fast, industry standard interface for connecting peripherals which require fast data transfer, such as hard drives and scanners.

- Sound Output Port For connecting external speakers or exporting sounds created on your computer. Some models offer stereo output.
- Sound Input Port For adding voice, music and sounds to applications. Useful for such tasks as verbally notating a spreadsheet or document, or adding lifelike sounds to presentations and animations.
- Video Output Port For connecting your choice of monitor. The range of monitors that can be connected depends on the Macintosh model you have.

Video. Macintosh computers without an integral monitor come with video circuitry that works with a wide range of monitors. In all Macintosh models, this circuitry produces a crisp, high-resolution image on-screen. Check the table to see which

monitors are supported by the video circuits in each model. (The Macintosh IIfx does not include a video output port; you select your own to meet your needs).

Keyboard. With all Macintosh models, you can choose from either a standard 78 key keyboard (with numeric keypad) or an extended 105 key keyboard which includes function keys important when connecting to mainframes or running MS-DOS programs.

Mouse. The pointing and drawing device used with all Macintosh software is standard on all models.

Networking. All Macintosh models have built-in AppleTalk networking capability.



	Macintosh Classic	Macintosh LC	Macintosh IIsi	Macintosh SE/30	Macintosh Portable	Macintosh IIci	Macintosh IIfx
Main Unit	compact 68000 8 MHz	modular 68020 16 MHz	modular 68030 20 MHz	compact 68030 16 MHz	portable CMOS 68000 16 MHz	modular 68030 25 MHz	modular 68030 40 MHz
Memory	1M (to 4M)	2M (to 10M)	2M (to 17M)	1M (to 8M)	1M (to 9M)	4M (to 32M)	4M (to 32M)
Standard Disk Storage	SuperDrive	SuperDrive	SuperDrive	SuperDrive	SuperDrive	SuperDrive	SuperDrive
Optional Disk Storage*	40M hard drive	40M hard drive	40M hard drive 80M hard drive	40M hard drive 80M hard drive	40M hard drive	40M hard drive 80M hard drive	80M hard drive 160M hard drive
Monitor**	9" monochrome included	12" color 12" monochrome 13" Hi Res color	12" color 12" monochrome 13" Hi Res color Portrait Display	9" monochrome included	Full-page width Active matrix LCD included	12" color 12" monochrome 13" Hi Res color Portrait Display	
Expansion Slots	(none)	1 020 Direct	1 NuBus or 030 Direct***	1 030 Direct	1 68000 PDS 1 RAM Expansion Slot	3 NuBus	6 NuBus 1 PDS
Standard Ports	floppy drive 2 serial ports 1 ADB port SCSI port sound (out)	2 serial ports 1 ADB port SCSI port sound (out) sound (in) video output	floppy drive 2 serial ports 1 ADB port SCSI port stereo sound (out) sound (in) video output	floppy drive 2 serial ports 2 ADB ports SCSI port stereo sound (out)	floppy drive 2 serial ports 2 ADB ports SCSI port stereo sound (out) 1 power adapter video output	floppy drive 2 serial ports 2 ADB ports SCSI port stereo sound (out) video output	2 serial ports 2 ADB ports SCSI port stereo sound (out)
Additional Features			PMMU 68882 coprocessor	PMMU 68882 coprocessor	power adapter port internal modem slot 6-12 hour battery	PMMU 68882 coprocessor cache card slot	PMMU 68882 coprocessor
Optional Operating Systems****		MS-DOS ProDOS DOS 3.3	A/UX MS-DOS	A/UX MS-DOS	MS-DOS	A/UX MS-DOS	A/UX MS-DOS

^{*} These are standard internal hard disk options. A wide range of external hard disks are also available.

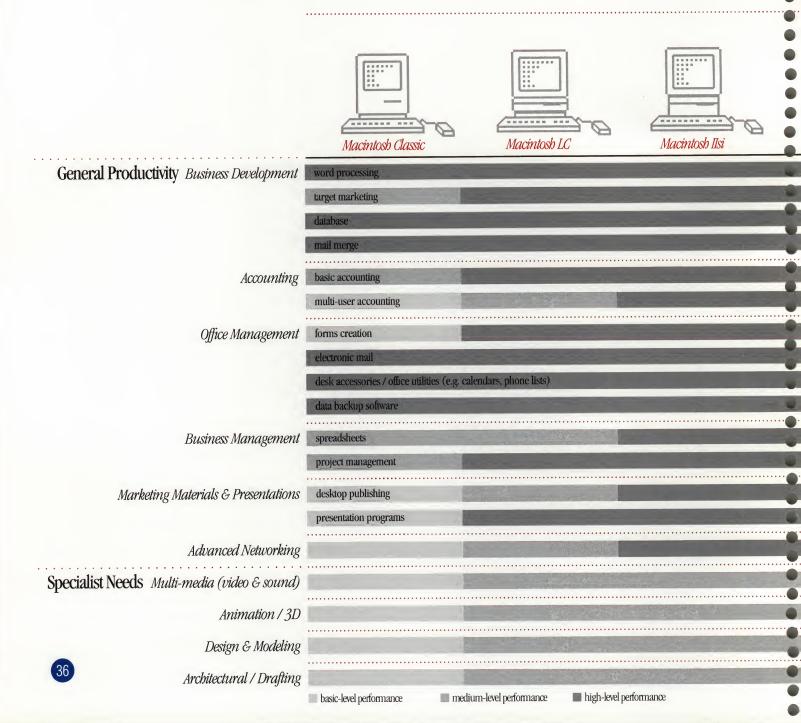


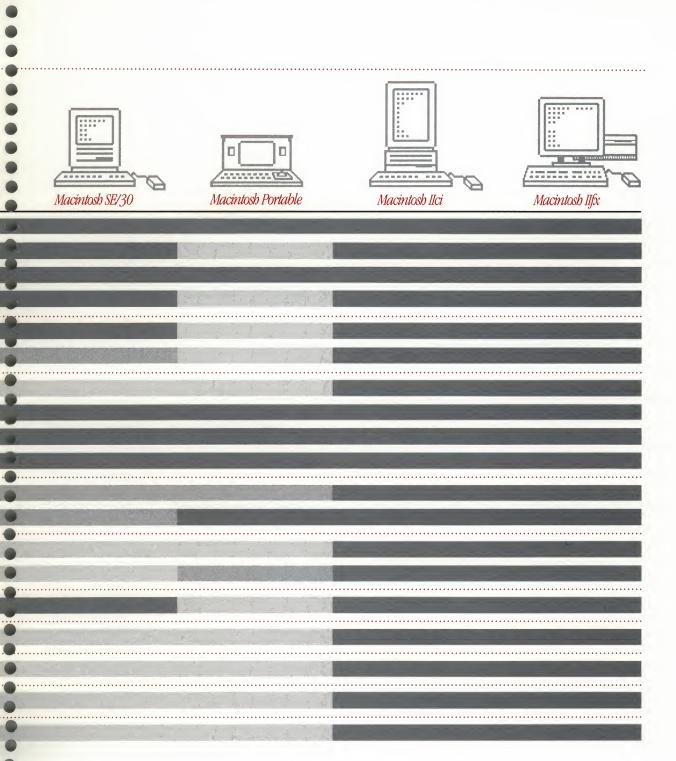
^{**} These are standard monitor options compatible with video circuitry in these models. With add-on cards, other monitors will also work with most modular Macintosh computers.

^{***} With optional adapter card.

^{****} Running optional operating systems may require additional hardware or software. Check with your authorized Apple reseller for more information.

Business Solutions.





Now that you've learned more about the full range of Macintosh computer solutions, you're probably getting a good idea of the kind of computer(s) you need for your business. This section will suggest a few recommended systems based on various levels of needs. Please refer back to the Computer Needs Questionnaire (page 21) and fill in the system(s) that closely match the needs of your business. This will help you discuss your hardware requirements with your authorized Apple reseller.

A System for Basic Business Needs. At the heart of this system is the new affordable Macintosh LC with all the power you need for basic office productivity and management. With a Personal LaserWriter SC you can produce professional quality presentations and marketing materials as well as reports and correspondence. If you have a

smaller, but growing business, this could be the right system for you.

Mid-range Performance for More Demanding Tasks. If you need to run sophisticated accounting programs, handle large databases or do basic desktop publishing and page layout, this system can meet your needs and more. The Macintosh IIsi runs applications up to four times faster than the Macintosh Classic and can expand its

speed and power when your business needs it. The full page monitor shows large amounts of information clearly and the extended keyboard gives you the convenience of a numeric keypad and function keys. Top it off with the print quality and speed of the LaserWriter IINT and you've got a powerful system for now and the future.

High Performance for Advanced Needs. This system features the advanced power and speed of the Macintosh IIci, which runs up to six times faster than the Macintosh Classic. If your business has specialized needs such as large spreadsheets, architectural or engineering design or extensive desktop publishing, the Macintosh IIci can

meet your needs today and expand as they change. The 13 inch color monitor has a photographic quality display and the LaserWriter IINIX is Apple's state-ofthe-art laser printer.

One Computer, Many Desktops. If you often find yourself working at multiple locations—at home, at the office, on the road, or elsewhere—you might find the Macintosh Portable to be an invaluable business tool. With 4 megabytes of internal memory, you can store all your basic programs on the hard disk and always have your most current work

with you no matter where you choose to work. The flexible Macintosh Portable plugs into any Apple printer and you can easily add an internal modem for instant communication with other computers from any telephone.

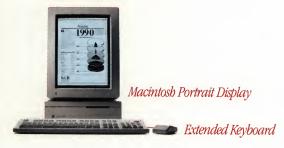






Personal LaserWriter SC

Macintosh IIsi





LaserWriter IINT

Macintosh Ilci





LaserWriter IINIX

Macintosh Portable



Whatever questions you may have, you're not the first one to ask them. We've collected some of the questions resellers have told us new Macintosh buyers ask most and reproduced them here to save you the trouble of asking. But if you come up with some we haven't answered, don't hesitate to contact your authorized Apple reseller.

Do I have to wait for the machine to be shipped?

In most cases, your authorized Apple reseller will have the Macintosh you want in stock. If it must be ordered, your Apple reseller will work with you to have your system ready when you need it.

Who installs my Macintosh? Do I have to do it myself?

Macintosh is simple to install, even for first-time computer users. Apple provides a clearly-illustrated manual that explains every step.

Does the Macintosh need to be set up in any special location?

A Macintosh can take about the same climatic conditions you can. Try to set the computer up in a room that's not unusually dusty and keep temperatures reasonable: Macintosh is designed to operate reliably between 50° F and 95° F.

What other supplies and accessories will I need?

Most everything you need comes with your machine, including a copy of the operating system software and manuals and tutorials. Don't forget to pick up paper for your printer, a few boxes of blank disks and check to see that you have all the cables you need. If you're connecting several Macintosh computers to the same printer you'll need extra network cables. Ask your reseller for a mouse pad, too — it's a little mat that reduces wear and tear on your mouse, and helps it move more smoothly.

Where do I get the training I need? Macintosh comes with a training tutorial disk to help you get started and that may be all you need. Most software you buy also comes with a tutorial manual or guided tour disk for on-screen tutorials. The best way to get started is just to dive in and start experimenting. You really can't hurt anything. If you need more help later as your needs get more complex, your authorized Apple reseller can help you find consultants and training courses in your area.

What's the best place to start?

After you've completed the Macintosh disk tutorial, you'll be ready to tackle your first business task. Some computer tasks are easier than others. One good place to start is word processing. Most people can print out their first letter in less than an hour and the basics you learn about word processing will help you out in all Macintosh programs that use words in any way, shape or form.

Spreadsheets are a good second step, letting you manipulate numbers just as word processors let you work with text.

Database software is usually more complex and so is accounting software. These are generalizations, of course. Different software from different manufacturers varies widely in learning time and new users vary widely in the way they pick up new information.

What kinds of financing programs are available?

Apple has a variety of flexible credit and leasing programs available for businesses, such as the Apple Business Credit Card and Apple Business Lease. It's easy to qualify and the paperwork is minimal. Rates are very competitive with other financing programs. Your authorized Apple reseller can give you detailed information about financing options that won't tie up your current capital resources.

What kinds of service options are available?

Apple makes some of the most reliable products in the computer industry. But sometimes the unexpected happens. So every new Apple computer comes with a full one-year limited warranty. You can purchase annually an extended service plan called AppleCare® to extend your coverage by one year after the original warranty expires. With AppleCare, you can have a covered product serviced by any authorized Apple reseller, as often as needed, and without paying a penny for parts or labor.



More Information.

There are thousands of powerful business software programs available for Macintosh computers — from easy-to-use word processors to database applications and heavy duty number crunching spreadsheets to sophisticated desktop publishing programs.

Here is a list of just a few of the many popular Macintosh programs which you might use for your general productivity needs. The products are identified by business categories for easier reference. And we've included the names and phone numbers of each software publisher so you can get more specific information about product features, pricing and where they are sold when you are ready to buy.



Business Development

Word Processing/Mail Merge...

MacWrite® II

Claris Corporation (408) 727-8227

WriteNow™

T/Maker Co. (415) 962-0195

Microsoft Word

Microsoft Corporation (206) 882-8080

Microsoft Works

Microsoft Corporation (206) 882-8080

Target Marketing

Lotus MarketPlace™

Lotus Development Corporation (800) 343-5414

Database Management ...

FileMaker® Pro

Claris Corporation

(408) 727-8227

4th Dimension®

Acius, Inc. and ACI

(408) 252-4444

Microsoft Works

Microsoft Corporation (206) 882-8080

Mapping.

GeoQuery®2.0

Odesta Corporation (800) 323-5423

MapMaker™4.5

Strategic Mapping, Inc. (408) 985-7400

Office Management

Forms Processing ..

SmartForm Designer® 1.1 Claris Corporation

(408) 727-8227

TrueForm®

Adobe Systems Incorporated

(800) 344-8335

if:XForms Designer™

Softview, Inc.

(800) 622-6829

Electronic Mail.

QuickMail™2.2

CE Software, Inc.

(800) 523-7638

cc:Mail™

cc:Mail, Inc.

(800) 448-2500

Microsoft Mail 2.0

Microsoft Corporation

(206) 882-8080

Mention of third parties and third party products is for informational purposes only and constitutes neither an endorsement nor a recommendation. All product specifications and descriptions were supplied by the respective vendor. Apple assumes no responsibility with regard to the selection, performance or use of these vendors or products. All understandings, agreements or warranties, if any, take place directly between the vendor and the prospective users.

Office Utilities (Desk Accessories) CalendarMaker™ CE Software, Inc.	Business Planning & Management	<i>Ready, Set, Go!</i> ™ Letraset® (201) 845-6100	
(800) 523-7638	Spreadsheets	Publish It®	
SoftPC® Insignia Solutions Inc.	Excel Microsoft Corporation	Timeworks, Inc. (708) 948-9208	
(800) 848-7677	(206) 882-8080	Quark XPress®	
SUM II™/ SAM™/ Norton Utilities® for the Macintosh Symantec Corporation	Wingz® Informix Software, Inc. (913) 599-7100 FullImpact™	Quark, Inc. (800) 356-9363 Adobe Photoshop™	
(800) 441-7234 or (800) 626-8847 in CA	Ashton-Tate Corporation (213) 329-9989	Adobe Systems Incorporated (800) 344-8335 Adobe Illustrator 88™	
Accounting	Project Management	Adobe Systems Incorporated	
M.Y.O.B.™	MacProject®	(800) 344-8335	
Teleware, Inc. (800) 322-6962	Claris Corporation (408) 727-8227	Presentations Persuasion®	
Accountant Inc. Professional® 1.0 Softsync/Bloc Publishing (305) 445-0903	<i>KeyPlan</i> ™ Symmetry Software Corporation (602) 998-9106	Aldus Corporation (206) 628-2320 PowerPoint® Microsoft Corporation (206) 882-8080	
<i>Quicken®</i> Intuit (800) 624-8742 or	Outlining & Idea Generators MORE™ III		
(800) 468-8481 in CA	Symantec Corporation	CAD/CAM	
Components, Project Billing Satori Software	(800) 441-7234 or (800) 626-8847 in CA	Claris® CAD Claris Corporation	
(206) 443-0765	Marketing Materials &	(408) 727-8227	
Great Plains Accounting® Series for the Macintosh	Presentations	AutoCAD® Autodesk Inc.	
Great Plains Software	Desktop Publishing	(415) 332-2344	
(800) 456-0025	PageMaker® 4.0	Dreams® 1.1	
At Once™ Layered, Inc. (617) 242-7700	Aldus Corporation (206) 628-2320	Innovative Data Design Inc. (415) 680-6818	



Specialized Software for Specific Businesses.

Some software is designed specifically to meet the needs of a particular type of business. Thousands of the most innovative programs in the world have been written for Macintosh. The following list offers just a sample of the wide range of specialized programs available for Macintosh.

To give you an idea of the possibilities these products may offer your business, here are descriptions of six programs (including real estate, legal, retail, manufacturing, accounting and marketing/ communications software).

The names and telephone numbers of other specialized software programs are also listed



iNet Company of America (703) 631-6500 Allows on-line access to the information network of the American Bar Association.

The Ad Director™

Media Marketing Materials (303) 499-1490 Helps advertising and marketing personnel convert research data into professional sales presentations.

Taxview® 1040

Softview Inc. (800) 622-6829

Full featured tax preparation program.

Job Cost II™

Advanced Data Systems Inc. (407) 657-4805 Designed to estimate for labor, materials and sub-contract services for built-to-order jobs.

Mortgage Loan Calculator

HMS Computer Company (612) 452-5928 Determines the different financing options available for home buyers.

P•O•S/Mac™

Software Complement (717) 491-2492

Features invoice preparation, price quotes, reporting and much more for retail and mail order businesses.

Construction

AEC Information Manager™ AEC Management Systems Inc. (800) 346-9413

The Contractor™

Computer Solutions (206) 456-1888

Hyper •Estimator™/Hyper •Remodeler™/

MacNail™ Turtle Creek Software

(607) 589-4471

Bid Master

Building Pro Software (800) 346-4694

Dream Home Designer

Dream Home Designer Inc.

(813) 366-3777

Real Estate

ZibForm®

Advanced Productivity Systems Inc. (805) 373-1566

The Real Estate Edge™

Metropolis Software Inc. (415) 322-2001

Client™

Trendware Corporation (203) 926-1116

Real Estate Master™

Tronsoft Inc. (805) 564-3386

MacFreedom™

Financial Freedom Report (801) 943-1280



Legal
LexaFile™ 1.7
Xram Xpert Systems
(212) 989-8356
Legal Billing
Satori Software
(206) 443-0765
MD MARS® (Multi-user Archival
Retrieval System)
Micro Dynamics, Ltd.
(301) 589-6300
CPA
Timeslips® III
TIMESLIPS Corporation
(800) 338-5314
Insurance
Broker's Case
Stanford Business Systems Inc.
(213) 417-4940
AgentBase®
Merry Maid Inc.
(215) 588-0927
Architecture
Architrion II™ Series 5.5
Gimeor Inc.
(202) 546-8775
Building Code Analyst™
Architectronica
(213) 376-7054
Model Shop™
Paracomp Inc.
(415) 956-4091

Engineering
Swivel 3D Professional™
Paracomp Inc. and VPL
(415) 956-4091
Ashlar® Vellum™
Ashlar Inc.
(408) 746-0894
FRAME mac™/BEAM mac™/
BEAM mac II™
COMPUneering Inc.
(416) 738-4601
MacBRAVO!™
Schlumberger CAD/CAM
(313) 995-6000
Advertising/Marketing
Communications
Adobe Photoshop
Adobe Systems Incorporated
(800) 344-8335
MacPromo® II
Abacus Inc.
(415) 759-9508
Digital Darkroom™
Silicon Beach Software Inc.
(619) 695-6956
Health Care
CMA Dental [™] for the Macintosh
CMA Micro Computer Division
(619) 365-9718
Healthledger™
HealthCare Communications Inc.
(800) 888-4344



your local authorized Apple reseller.

General Information.

- For the name of your local authorized Apple reseller, call 1-800-538-9696, extension 950.
- To find the Macintosh user's group nearest you, call 1-800-538-9696, extension 500, or ask your local authorized Apple reseller.
- For more information about Macworld Expo, call (617) 361-8000.

Books and Magazines.

After you finish this Guide, you may want to read more. Here are just a few suggestions from the scores of excellent Macintosh books and magazines available.

Big Mac Book By Neil Salkind. Que, 1989. 898 pp. \$27.95

A good overview for new or prospective Macintosh users. Especially useful are the comparisons of popular business applications and the discussions of basic issues to consider in buying software and hardware.

*Dr. Macintosh*By Bob LeVitus. Addison-Wesley, 1989.
341 pp. \$19.95

A wealth of tips and explanations for those already familiar with Macintosh basics. Written in an engaging, informal style. Provides useful advice from other experts and software-specific recommendations.

Encyclopedia Macintosh
By Craig Danuloff and Deke McClelland.
Sybex, 1990.
782 pp. \$26.95

Alphabetically-arranged explanations of every conceivable Macintosh topic. Includes an excellent section explaining chips, hard drives, and other hardware topics in lay terms. Also includes a comprehensive Macintosh bibliography, a list of on-line services and a glossary, all in very readable style.

Encyclopedia Macintosh Instant Reference

By Craig Danuloff and Deke McClelland. Sybex, 1990.

243 pp. \$9.95

A subset of *Encyclopedia Macintosh*, this book serves as a quick reference to twenty-six popular software programs. Included are "menu maps" detailing the commands of each program, keyboard shortcuts and tips.

HyperCard Power
By Carol Kaehler Addison-Wesley, 1988.
433 pp. \$17.95

One of the best guides for exploring HyperCard, the innovative information management program included with every Macintosh. Kaehler, a member of Apple's HyperCard team, writes clearly and includes lots of hands-on exercises to lead readers from the basics to complex creations.

The Macintosh Bible
By Arthur Naiman and Sharon Aker.
Goldstein & Blair, 1990.
759 pp. \$28.00 (\$38.00 with disk)
The most complete compendium of
Macintosh tips and shortcuts available. A
great desk reference once you're up and
running on the Macintosh. Purchase
includes free updates.

The Mac Bible What Do I Do Now Book?

By Charles Rubin. Goldstein & Blair, 1990. 191 pp. \$12.00

Even the best computers sometimes surprise us by acting unpredictably. This excellent trouble-shooting reference recommends cures for the hiccups and sneezes that can crop up from time to time on the Macintosh. Consider it the Dr. Spock guide for your new arrival.

The Macintosh CAD/CAM Book By the editors of CAD/CAM Journal. Scott-Foresman, 1989.

390 pp. \$24.95

If you're considering a Macintosh for computer-aided design, engineering, or manufacturing, read this book for a good overview. Discusses the issues of 2D and 3D design and modeling, with specific advice for using Macintosh in architecture and construction, design and drafting, civil engineering, aerospace design, package design and more.

Macintosh Multimedia Handbook By Tony Bove and Cheryl Rhodes. Que, 1990.

432 pp. \$22.95

A comprehensive overview of using Macintosh for multimedia. Includes chapters on desktop video production, animations, slides, CD-ROM, sound, page makeup and more. A good explanation of what Macintosh multimedia is, and a good bibliography.

The Macintosh Small Business Companion

By Cynthia W. Harriman. Brady Books, 1989.

357 pp. \$24.95

Over-the-shoulder advice and case histories from dozens of small business users. Not just a collection of tips, this book gives you the knowledge you need to master new areas on your own once you're familiar with the basics.

Quick & Easy Guide to Macintosh for MS-DOS Users

By Rusel De Maria and David Altanian. Brady Books, 1989.

270 pp. \$24.95

For those who already "speak" MS-DOS, this book explains Macintosh hardware and software in IBM PC terms. A good way to transfer your existing computer knowledge efficiently.

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78 pp. \$9.95

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Active Matrix LCD. State-of-the-art technology for portable computer screens. Active matrix liquid crystal displays have a transistor behind every single pixel, making them the fastest, clearest screens available.

Apple Desktop Bus Port. A connector on Macintosh computers used largely for input devices like the keyboard and mouse.

Apple IIe Emulator Card. When this card is installed, your Macintosh LC can run a wide range of Apple II software as well as its usual Macintosh programs.

AppleTalk. The networking system built into all Macintosh computers.

Application or application program. See Computer Basics, page 27.

Back-up. (v.) To make a spare copy of a disk or of a file.

Backup. (n.) A copy of a disk or file.

Baud. The rate at which information is sent or received by computers. Used especially in conjunction with modems and networks, baud is to data as miles per hour is to cars.

Bit. See Computer Basics, page 24.

Boot or boot up. Jargon for starting up a computer or starting a new program.

Byte. See Computer Basics, page 24.

Cache. An area of memory used to speed up programs on a computer. Delays occur when programs must wait for more instructions from the disk drive. Keeping the instructions in memory instead of on disk speeds operations. Cache cards add extra memory to your machine solely for use as a cache.

Card. A plug-in circuit board used in computers to add extra capabilities.

Chip. An integrated circuit that stores information or performs calculations.

Communications. The transfer of data between computers.

Communications cards. Any add-on circuit board that helps you send information in and out of your computer. This could include an internal modem or for larger businesses, high-speed networking.

Compatibility. The ability of various types of hardware and software to work together.

Configuration. A specific combination of hardware and/or software which makes up a total computing system.

Coprocessor (1). An extra chip that works with the computer's processor or CPU to speed operations. The most common Macintosh coprocessor is the 68882 chip, also called a "floating point unit" or a "math coprocessor" for its ability to make lightning-quick calculations.

Coprocessor (2). An extra chip that allows the Macintosh to run MS-DOS programs. Commonly comes on a card with extra memory and other circuitry helpful in making your Macintosh imitate a DOS machine. There are also software-only solutions to running DOS software.

CPU. See Computer Basics, page 24. CRT. Cathode ray tube; a picture tube used in a computer monitor or TV. Some computer users refer to the monitor as "the CRT."

Data. See Computer Basics, page 27.

Data backup. Systems which copy selected data to ensure it will be saved in the event of a system interruption or power failure. Data can be backed up to other disks or to magnetic tape storage devices.

Desk accessories. "Mini-applications" that are available from the Apple menu regardless of which application you're currently using.

Digital. Refers to the digits (the 1's and 0's), or bits, that computers work with.

Disk drive. See Computer Basics, page 25.

Disk. Any medium where data is stored — a hard disk, floppy disk, or optical disk.

Dot matrix printer. See Computer Basics, page 26.

Expansion slots. Long sockets inside computers for the addition of cards that expand memory and/or allow peripheral devices to run on the system.

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Floating point unit. Another name for the 68882 math coprocessor added to some Macintosh models to help them perform complex calculations quickly.

Floppy disk. A magnetic-coated plastic disk for information storage, permanently encased in a thin, protective plastic shell.

Font. A complete set of characters in one design and style.

Graphical interface. Any computer "front end" that relies largely on icons (pictures) instead of text to interact with users.

Hard disk. A sealed disk and disk drive, larger and with more speed and storage capacity than a floppy disk drive.

Hardware. The mechanical components in a computer system — that is, the CPU and peripherals.

Import/export data. To bring data from one program to another on the same type of computer, or from one type of computer to another. For example, exporting a graphic image from a drawing program to a word processor, or importing a Lotus 1-2-3 file (from an IBM PC) into Microsoft Excel (on the Macintosh).

Initialize. To prepare a blank disk to receive information by organizing its surface into an invisible electronic grid of tracks and sectors.

Integrated circuit. Same as a chip.
Interface. The connection between the computer and peripherals that makes them compatible (able to communicate) with one another.

Kilobyte. See Computer Basics, page 24. *Laser printer.* See Computer Basics, page 26.

Liquid crystal. A form of computer display that arranges liquids within a thin crystal sheet — as some digital watches do — to create an image.

Megabyte. See Computer Basics, page 24.

Microcomputer: The official term for most personal computers. The next step up in power is a minicomputer. Then, superminis. Then mainframes.

Microsoft Windows. Software that brings a graphic interface to MS-DOS machines. Using Windows still requires a knowledge of MS-DOS, and does not offer the same consistency as the Macintosh graphic interface.

Module. A piece of software which is part of a larger package. For example, accounting software usually includes General Ledger and Payroll modules.

Monitor. The video or liquid-crystal display screen on a computer.

Mouse. See Computer Basics, page 25.

MS-DOS. The Microsoft Disk Operating System. It's the operating system that governs the IBM PC (under the name PC-DOS) and compatible computers.

MultiFinder: Part of Macintosh system software that makes it easy to keep several programs—like a database, a word processor and a paint program—open at once.

Multi-tasking. A process in which a computer can run multiple applications concurrently.

Network. See Computer Basics, page 26.

NuBus expansion slot. One of two kinds of connectors for add-on circuit boards on the Macintosh. Used in the Macintosh IIsi, IIci and IIfx.

Numeric keypad. The number keys on the right side of a Macintosh keyboard, arranged in calculator style.

On-line information service. Any of several dozen commercial services that offer electronic mail and/or databases. Accessible with a modem, these services offer everything from stock quotes to business advice to software support.

Operating system. The set of instructions that gives the computer its ground rules, so it understands the software and hardware and works with it in a predictable way.

Parallel interface. A connector that can send groups of information simultaneously over several wires, like a multilane highway.

PDS slot. A connector for add-on circuit boards on the Macintosh.

Peripherals. A piece of computer hardware — such as a disk drive, printer, or modem — used in conjunction with a computer and under the computer's control. Peripheral devices are usually physically separate from the computer and connected to it by wires or cables.

Pixel. Short for picture element. On a simple monochrome computer screen, for instance, images and text are made up of small black dots, each of which is a pixel.

Port. See Computer Basics, page 25.

Print spooling. Dumping the computer's output into memory or into a special peripheral called a buffer, to more quickly free up the computer for continued use while printing.

Program. A set of instructions that the computer uses to perform actions.

Program disk. A disk that contains a program.

Random-access memory (RAM). See Computer Basics, page 24.

Read-only memory (ROM).

Contains the operating system and other basic instructions for the computer. It is permanent memory, which remains even when you turn off the power. You can't add to or alter it.

Scanner: A device which copies text, graphics or photographs from a printed page into a computer.

Serial interface. An interface that sends information from one device to another in a steady stream of data bits like a single lane road. (Opposite of parallel interface.)

Slots. Another term for expansion slots. Software. The part of a computer system (specifically, operating systems and programs) that isn't physical and mechanical. Software may also be referred to as "applications" and "pro-

Startup disk. A disk with all the necessary program files - such as the Finder and System file contained in the Macintosh System Folder — to set the computer into operation.

grams."

System file. A file Macintosh computers use to start up and to control basic machine operations.

System folder: A folder containing the System file plus other important programs for controlling the Macintosh and its peripheral devices.

Telecommunications. Transmission of voice and/or data over a phone line or network.

Text file. A file that contains only readable characters without graphics or special formatting information like fonts, margins and indents. On the Macintosh, such files are known as Text Only documents. On the Apple II they are called TXT files and in MS-DOS as ASCII files.

Value Added Reseller. A hardware or software vendor who sells his or her product as a bundled solution. For instance, someone who sold a Macintosh, printer and specialized legal software to lawyers could be a Value Added Reseller, or VAR. VARs differ from Authorized Apple Resellers in that they must sell complete solutions and are not permitted to sell individual pieces of hardware alone.

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